



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,190	10/22/2003	Clayton L. Holstun	100200774-1	6785
22879	7590	08/23/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			LEBRON, JANNELLE M	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,190

Applicant(s)

HOLSTUN ET AL.

Examiner

Jannelle M. Lebron

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 13, 18-21 and 25 is/are rejected.
- 7) ☒ Claim(s) 4-12, 14-17, 22-24 and 26-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 424. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 5 and 6 are objected to because of the following informalities: can be interpreted as claiming that the device prints the second swath at a temperature near 0°C. By reading the specification, it is assumed that said temperature is referring to the differential between the first and second swath. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 21 fails to further limit. Limitation of this claim is previously set forth in claim 20.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1, 2, 13, 18, 19, and 25 are rejected under 35 U.S.C. 102(be) as being anticipated by Crivelli (US Patent 6,871,929).
7. Crivelli discloses a "printing system, comprising:

an inkjet printhead [102] configured to traverse bi-directionally [as seen in figure 2] over a printzone printing one swath in a first direction, and a subsequent swath in a second direction opposite the first direction, with the printhead [102] rising to a base temperature [see column 3, lines 62-64] in response to a pre-warming signal prior to beginning each swath [see column 4, lines 52-53];

a temperature sensor [544] configured to monitor a temperature of the printhead [102]; and

a controller [110] configured to generate the pre-warming signal in response to an end of swath temperature monitored by the temperature sensor following conclusion of printing the one swath [see column 7, lines 36-47].”

8. Regarding claim 2, Crivelli discloses a “printing system wherein the controller [110] is configured to generate the pre-warming signal in response to a rule-based system [it is clear in the description that the system has a predetermined set of operating rules].”

9. In regard to claim 13, Crivelli discloses a “printing system, comprising:

means [102] for ejecting ink droplets bi-directionally over a printzone when printing one swath in a first direction, and a subsequent swath in a second direction opposite the first direction [as seen in figure 2];

means [544] for monitoring temperature of the means for ejecting; and

means [110] for setting a base temperature prior to beginning a subsequent swath [column 3, lines 62-64] in response to an end of swath temperature monitored by the means for monitoring [544].”

10. In regard to claims 18 and 19, Crivelli discloses a “method for printing with an inkjet printhead [102] bi-directionally over a printzone by printing one swath in a first direction and a subsequent swath in a second direction [as seen in figure 2], comprising:

printing the one swath;

monitoring the temperature of the printhead [544];

in response to a monitored end of swath temperature following conclusion of printing the one print swath, changing the printhead temperature to a base temperature prior to beginning printing of the subsequent swath [column 7, lines 36-47]; and

printing the subsequent swath.”

11. Regarding claim 19, Crivelli discloses a change in swath temperature “wherein the changing is conducted in accordance with a rule-based system.”

12. In regard to claim 25, Crivelli discloses “an inkjet printing mechanism, comprising:

a carriage [234] configured to traverse bi-directionally over a printzone;

an inkjet printhead [250] supported by the carriage to print one swath in a first direction, and a subsequent swath at a second direction opposite the first direction [as seen in figure 2], with the printhead rising to a base temperature [see column 3, lines 62-64] in response to a pre-warming signal prior to beginning each swath [see column 3, lines 49-50];

a temperature sensor [544] configured to monitor temperature of the printhead;

and

a controller [110] configured to generate the pre-warming signal in response to an end of swath temperature monitored by the temperature sensor following conclusion of printing the one swath [see column 7, lines 36-47].”

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crivelli in view of Suzuki (US Patent 5,353,052).

15. Crivelli meets the claimed limitations except “the base temperature for printing the one swath at a first temperature, and the base temperature for printing the subsequent swath at a second temperature above the first temperature.”

16. Suzuki teaches an inkjet recording apparatus whose “test patterns [see figure 21, where each color strip can be considered a swath] are printed at the head temperature of 40°C as the first temperature adjustment standard and 50°C as the maximum temperature [see column 25, lines 6-9].” It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a printing system that sets the base temperature for the second swath at a temperature above the one of the first swath.

Art Unit: 2861

One would have been motivated to modify Crivelli to detect and fix printing pattern problems as taught by Suzuki.

17. In regard to claims 20 and 21, Crivelli meets the claimed limitations except “wherein the changing sets the base temperature for printing the one swath at a first temperature, and the base temperature for printing the subsequent swath at a second temperature above the first temperature.”

18. Suzuki teaches an inkjet recording apparatus whose “test patterns [see figure 21, where each color strip can be considered a swath] are printed at the head temperature of 40°C as the first temperature adjustment standard and 50°C as the maximum temperature [see column 25, lines 6-9].” It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a printing system that sets the base temperature for the second swath at a temperature above the one of the first swath. One would have been motivated to modify Crivelli to detect and fix printing pattern problems as taught by Suzuki.

Allowable Subject Matter

19. Claim 4-12, 14-17, 22-24, and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter:

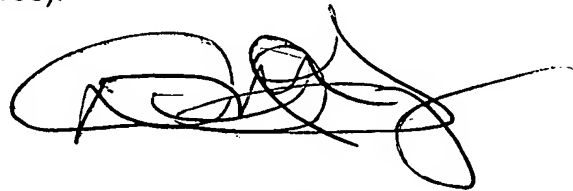
21. Prior art does not disclose or suggest the "fixed second temperature [claims 4 and 22]."
22. Prior art does not disclose or suggest the claimed "system that allows the printhead temperature to drop to a third temperature below the first temperature prior to printing the subsequent swath [claims 7 and 23]."
23. Prior art does not disclose or suggest the claimed "second temperature being a fixed value less than the end of swath temperature for the one swath."
24. Prior art does not disclose or suggest the claimed "system wherein the printhead temperature between printing the one swath and the subsequent swath is held at the second temperature prior to printing the subsequent swath [claims 9, 14, and 26]."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jannelle M. Lebron whose telephone number is (571) 272-2729. The examiner can normally be reached on Monday thru Friday 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jml

A handwritten signature in black ink, appearing to read 'David Gray', with a long horizontal line extending to the right.

David Gray
Primary Examiner